# PATENT COOPERATION TREATY

# **PCT**

# TRANSLATION INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference PCT-2427				FOR FURTHER A	CTION	See Form PCT/IPEA/416					
International application No.				International filing da	nte (day/month/year)	Priority date (day/month/year)					
PCT/JP2004/016681			6681	10.11.200	4	08.12.2003					
Internat	International Patent Classification (IPC) or national classification and IPC										
C10B53/00(2006.01), C10B47/00(2006.01)											
Applicant INTELLECTUAL PROPERTY BANK CORP.											
1.	1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.										
2.	This F	REPORT consi	sts of a total of	5	sheets, including	this cover sheet.					
3.	This r	eport is also ac	companied by A	NNEXES, comprising:							
	a. \sum	(sent to t	he applicant and	to the International Bu	ureau) a total of	sheets, as follows:					
	sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).										
	sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental										
		Box									
	b	(sent to t	he International .	Bureau only) a total of	(indicate type and number	r of electronic carrier(s))					
	, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see										
				rative Instructions).	is maleated in the Supplet	mental Box Relating to Sequence Listing (see					
4.	This r	eport contains	indications relati	ng to the following iter	ns:						
	$\boxtimes$	Box No. I	Basis of the	report							
		Box No. II	Priority								
		Box No. III	Non-establi	shment of opinion with	regard to novelty, inventi	ive step and industrial applicability					
		Box No. IV	Lack of unit	ty of invention							
	Box No. V  Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement										
		Box No. VI	Certain doc	uments cited							
		Box No. VII	Certain defe	ects in the international	application						
	Box No. VIII Certain observations on the international application										
Date of submission of the demand				Date of completion of thi	s report						
Name and mailing address of the IPEA/JP					Authorized officer						
Facsimile No.					Telephone No.						

International application No.

PCT/JP2004/016681

Box	No. I	Basis of the report								
1.		n regard to the <b>language</b> , this report is based on the internation cated under this item.	nal application in the language in which	n it was filed, unless otherwise						
			s report is based on translations from the original language into the following language ch is the language of a translation furnished for the purposes of:							
		international search (Rule 12.3 and 23.1(b))								
		publication of the international application (Rule 12.4	)							
		international preliminary examination (Rule 55.2 and								
2.	rece	n regard to the <b>element</b> s of the international application, this iving Office in response to an invitation under Article 14 ar report):								
		the international application as originally filed/furnished								
	$\boxtimes$	the description:								
		pages		as originally filed/furnished						
		pages*	received by this Authority on							
		pages*	received by this Authority on							
	$\boxtimes$	the claims:								
		nos. 4-12		as originally filed/furnished						
		nos.* 1-3	as amended (together with	any statement) under Article 19						
		nos.*	received by this Authority on							
		nos.*	received by this Authority on							
	$\boxtimes$	the drawings:								
		sheets _fig. 1-2		as originally filed/furnished						
		sheets*	received by this Authority on							
		sheets*	received by this Authority on							
		a sequence listing and/or any related table(s) – see Supplem	ental Box Relating to Sequence Listing	•						
3.		The amendments have resulted in the cancellation of:	amendments have resulted in the cancellation of:							
		the description, pages								
		the claims, nos.								
		the drawings, sheets/figs								
		the sequence listing (specify):								
		any table(s) related to sequence listing (specify):								
4.		This report has been established as if (some of) the amend they have been considered to go beyond the disclosure as fi								
		the description, pages								
		the claims, nos.								
		the drawings, sheets/figs	the drawings, sheets/figs							
		the sequence listing (specify):								
		any table(s) related to sequence listing (specify):								
*	If ite	rm 4 applies, some or all of those sheets may be marked "sup	erseded."							

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Box		Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement				
1.	Statement					
	Novelty (N)	Claims	1-12	YES		
		Claims		NO		
	Inventive step (IS)	Claims		YES		
		Claims	1-12	_ NO		
	Industrial applicability (IA)	Claims	1-12	YES		
		Claims		NO		

# 2. Citations and explanations (Rule 70.7)

- Document 1: JP 2002-194362 A (Nijieda Kabushiki Kaisha), 10 July 2002
- Document 2: JP 2002-364816 A (Kubota Corp.), 18 December 2002
- Document 3: JP 2002-322479 A (Kubota Corp.), 08 November 2002
- Document 4: JP 2001-220120 A (NKK Sogo Sekkei Kabushiki Kaisha), 14 August 2001
- Document 5: JP 2001-19970 A (Tatsuya MARUKAWA et al.), 23 January 2001

Documents 1 to 5 are cited in the international search report.

# 1. Claims 1 and 4 to 12

The inventions set forth in claims 1 and 4 to 12 do not involve an inventive step in the light of documents 1, 2 and 5.

Document 1 discloses a carbonization device wherein the superheated steam from the superheated steam supply source is brought into contact with an object to be treated so as to carbonize said object to be treated; therein, document 1 also indicates that said device is

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

equipped with a gas treatment device (i.e., a deodorization device) for burning the gas that is discharged from the carbonization furnace under high temperature conditions.

Meanwhile, document 2 discloses a device for subjecting organic waste to a heat treatment, which is equipped with a waste heat boiler that employs the exhaust gas from the deodorization furnace; therein, document 2 further indicates that said device supplies the steam that is generated by the waste heat boiler to the carbonization furnace.

Such being the case, it would have been easy to conceive of providing a waste heat boiler at a location downstream from the deodorization device of the carbonization device disclosed in document 1 in order to use the waste heat more effectively. At that time, it would be a natural design change to configure so that the steam generated by the waste heat boiler is supplied to the carbonization furnace via the superheated steam supply source instead of being supplied directly to the carbonization furnace.

Furthermore, configurations wherein a gas is supplied to a cylindrical device from a tangential direction are well known, as disclosed in document 5 for example.

# 2. Claims 2 and 4 to 12

The inventions set forth in claims 2 and 4 to 12 do not involve an inventive step in the light of documents 1 to 3 and 5.

Document 3 discloses a device for subjecting waste to a gasification treatment, which is equipped with a

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dryer that is disposed at a location upstream from the waste pyrolysis furnace; therein, document 3 also indicates that the exhaust gas from the waste pyrolysis furnace is used as the heat source for the dryer.

#### 3. Claims 3 to 12

The inventions set forth in claims 3 to 12 do not involve an inventive step in the light of documents 1 to 5.

Document 4 discloses a device for producing activated carbon from waste, which is equipped with an activation furnace that is disposed at a location downstream from the carbonization furnace; therein, document 4 also indicates that the exhaust gas from the activation furnace is used in the carbonization furnace.